



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|-------------------------|------------------|
| 10/091,750 | 03/05/2002 | Louis B. Rosenberg | IMMR-014/02US | 8227 |
| 22903 | 7590 | 02/04/2004 | EXAMINER | |
| COOLEY GODWARD LLP ATTN: PATENT GROUP 11951 FREEDOM DRIVE, SUITE 1700 ONE FREEDOM SQUARE- RESTON TOWN CENTER RESTON, VA 20190-5061 | | | LANEAU, RONALD | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2674 | |
| | | | DATE MAILED: 02/04/2004 | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/091,750

Applicant(s)

ROSENBERG, LOUIS B.

Examiner

Ronald Laneau

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. The amendment filed on 12/11/03 has been entered. Claims 38-57 are still pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 38, 39, and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable by Massie et al (US 5,898,599) in view of Chen et al (US 5,709,219).

As per claims 38 and 39, Massie et al teach a stylus 802 configured to be manipulated against a surface and configured to be held in a hand of a user (fig. 8); an actuator 812 connected to the end 808 of the end quarter gimbal 804 to which a stylus 802 is attached freely rotatably (col. 27, lines 58-60, fig. 8). Massie et al do not teach a sensor configured to send sensor signals to a host computer but Chen et al is used to show that the concept of having sensor to send signals to a processor is known as Chen et al teach a sensor processing that is configured to send sensor signals to a local processor (fig. 1B).

It would have been obvious to one of ordinary skill in the art to utilize the sensor taught by Chen et al into the device of Massie et al because it would provide information about tangential motion between the stylus and the user's hand.

As per claim 48, Massie et al teach an apparatus that may vary along its length based on the force applied by the user (col. 5, lines 60-62).

4. Claims 40, 41, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Massie et al (US 5,898,599) in view of Chen et al (US 5,709,219) and further in view of Berkson et al (US 5,627,348).

As per claims 40 and 41, the same rejection to claim 38 applies. Neither Massie et al nor Chen et al teach an apparatus comprises a power source disposed within the stylus and wherein the power source includes a battery but Berkson et al teach a stylus with a power source and wherein the power source is a battery 72 as claimed (col. 13, lines 38-43, fig. 12)

It would have been obvious to one of ordinary skill in the art to utilize the stylus including a power source which is a battery as taught by Berkson et al into the combined device of Massie et al and Chen et al because it would optimize the performance of the device by taking advantage of additional power in the stylus itself.

As per claims 44 and 45, Massie et al do not teach a stylus with a rotatable ball but Berkson et al teach a writing system or stylus wherein the tip comprising a ball rotating in the housing for rolling across the writing surface (figs 1-3). The actuator taught by Massie et al can apply the resistance against the stylus with a writing ball.

It would have been obvious to one of ordinary skill in the art to utilize the stylus with a writing ball as taught by Berkson et al into the combined device of Massie et al and Chen et al because it would achieve the tactile effect of writing with a conventional pen on a paper pad (col. 2, lines 64-65).

5. Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Massie et al (US 5,898,599) in view of Chen et al (US 5,709,219) and further in view of Van Namen (US 5,896,076).

As per claims 42 and 43, the same rejection to claim 38 applies. Massie et al do not teach an actuator producing a plurality of force sensations including a vibration, a voice coil but Van Namen is used to show that the concept of an actuator including vibration and a voice coil is well known (col. 2, lines 34-36).

It would have been obvious to one of ordinary skill in the art to utilize the actuator of solenoid type as taught by Van Namen into the combined device of Massie et al and Chen et al because it would improve the flux distribution in the air gap and also improve permeability under vibrations.

6. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Massie et al (US 5,898,599) in view of Chen et al (US 5,709,219) and further in view of Berkson et al (US 5,627,348) and further further in view of Van Namen (US 5,896,076).

As per claim 46, the same rejection to claims 38 and 44 applies. Neither Massie et al nor Chen et al nor Berkson et al teach an actuator which is a solenoid but Van Namen teaches an actuator which of solenoid type (col.3, lines 29-31).

It would have been obvious to one of ordinary skill in the art to utilize the actuator of solenoid type as taught by Van Namen into the combined device of Massie et al, Chen et al, and Berkson because it would increase the output force as a function of frequency and therefore providing good efficiency.

Art Unit: 2674

7. Claims 47, 49-53, and 55-57 are rejected under 35 U.S.C. 103(a) as being unpatentable by Massie et al (US 5,898,599) in view of Chen et al (US 5,709,219) and further in view of Gray et al (US 5,571,997).

As per claims 47, 49, and 55, see rejection of claim 38. Massie et al and Chen et al do not teach an actuator that is configured to vibrate at a high frequency but Gray et al teach a stylus wherein a force is converted into a corresponding modulation in the output frequency (col. 7, lines 40-48).

It would have been obvious to one of ordinary skill in the art to utilize the force modulation with high frequency as taught by Gray et al into the combined device of Massie et al and Chen et al because it would provide a pressure sensitive pen system utilizing an analog shift in radiated frequency proportional to the pressure being exerted by the pen on a tablet surface (col. 2, lines 20-24).

As per claim 56, Gray et al teach a stylus configured to be held in a hand and over against a surface (col. 2, lines 20-24).

As per claims 50, 51, 53, and 57, Gray et al teach a stylus configured to be held in a hand and over against a surface (col. 2, lines 20-24) and wherein a force is converted into a corresponding modulation in the output frequency (col. 7, lines 40-48). And the examiner takes the Official notice that a stylus with a rotatable ball is well known in the art.

As per claim 52, Gray et al teach a stylus configured to be held in a hand and over against a surface (col. 2, lines 20-24).

Art Unit: 2674

8. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable by Massie et al (US 5,898,599) in view of Chen et al (US 5,709,219) and further in view of Gray et al (US 5,571,997) and further further in view of Van Namen (US 5,896,076).

As per claim 54, the same rejection to claims 49-52 applies. Neither Massie et al nor Chen et al nor Gray et al teach an actuator which is a solenoid but Van Namen teaches an actuator which of solenoid type (col.3, lines 29-31).

It would have been obvious to one of ordinary skill in the art to utilize the actuator of solenoid type as taught by Van Namen into the combined device of Massie et al, Chen et al, and Gray et al because it would increase the output force as a function of frequency and therefore providing good efficiency.

Response to Arguments

9. Applicant's arguments about Massie and Chen not disclosing or suggesting an actuator disposed within the stylus. Contrary to applicant's arguments, Massie et al disclose an actuator 812 to which a stylus 802 is attached freely rotatably (col. 27, lines 58-60, fig. 8) and the stylus is obviously configured to be held in the hand of a user. Applicant further argues that neither Massie, Chen, and Gray discloses or suggests an actuator configured to vibrate at a high frequency so that a modulated force is applied to the stylus. Contrary to applicant's arguments, Gray is used to teach a stylus wherein a force is converted into a corresponding modulation in the output frequency (col. 7, lines 40-48). Therefore, the rejection finally stands.

Art Unit: 2674

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Laneau whose telephone number is 703-305-3973. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:00 PM or via email: ronald.laneau@uspto.gov.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached at 703-305-4709.

11. **Any response to this final action should be mailed to:**

BOX AF

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Ronald Laneau
Examiner
Art Unit 2674

rl
January 28, 2004



**RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**